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Yoshiaki Iwata

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WENDEROTH, LIND & PONACK L.L.P.
2033 K. STREET, NW
SUITE 800
WASHINGTON, DC 20006

EXAMINER

POPHAM, JEFFREY D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/571,463 | Applicant(s) IWATA ET AL. | |
| | Examiner JEFFREY D. POPHAM | Art Unit 2137 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060313</u> . | 6) <input type="checkbox"/> Other: _____ |

Remarks

Claims 1-12 are pending.

Information Disclosure Statement

1. The information disclosure statement filed 3/13/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. The foreign patent that is purported as having document number 3408786 does not appear to be in the file. An additional Japanese patent with publication number 2002-083226 is within the file, published 3/22/2002, but is not referred to on the IDS, and does not have the same publication date as document 3408786 as stated on the IDS.

Claim Objections

2. Claims 1-3, 5-10, and 12 are objected to because of the following informalities:
- Claim 1 recites a memory card comprising "a first rewritable memory", "first access control unit", "communication unit", "second access control unit", and "space unification unit". So as to be clear regarding antecedent basis, the latter 4 limitations should all begin with "a" just like the first limitation (such that "first access control unit" becomes "a first access control unit" as an example). This issue is found throughout the claims, only examples of which

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- are provided herewith. Another example is claim 3, that states "wherein the communication unit stores address of the storage device", which should read "wherein the communication unit stores an address of the storage device".
- Claim 5 refers to "the first access unit" and "the second access unit", which appear as though they are supposed to refer to "the first access control unit" and "the second access control unit", respectively, and have been construed as such. The second to last line of claim 5 refers to "the address", which has not been seen in either claim 5 or claim 1, from which claim 5 is dependent. For purposes of prior art rejection, "the address" has been construed as "an address".
 - Claim 7 refers to "the second authentication area", which has not been seen in the claims from which claim 7 depends. For purposes of prior art rejection, "the second authentication area" has been construed as "a second authentication area".
 - The final limitation of claim 8 states "the first access unit and the second access unit receives a request", which has the issues described regarding claim 5 above, as well as the issue of two units receiving the same request when the request is only directed to one of them (as proven by the rest of the limitation). For purposes of prior art rejection, this portion of claim 8 has been construed as "one of the first access control unit and the second access control unit receives a request".

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- Claim 12 recites "A memory space management program which is recorded on a semiconductor memory card which is attachable and removable to and from electronic equipment and includes a computer, causing the computer to function as" in the preamble. The wording of this preamble is quite awkward, as it reads that the program or the card includes a computer. While the card may include a processor or CPU, the card itself cannot not include a computer. There could also be issues with this claim being directed to a "program", even though it is stored on a computer readable storage medium (memory card). An example of better wording for this preamble could be "A semiconductor memory card that includes a CPU and a nonvolatile memory storing a memory space management program, said semiconductor memory card being attachable to and removable from electronic equipment, said CPU executing the following steps" and providing steps thereafter in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1, 3, and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yahiro (U.S. Patent Application Publication 2002/0037745) in view of Yamagami (U.S. Patent 7,240,197).

Regarding Claim 1,

Yahiro discloses a semiconductor memory card attachable to and removable from electronic equipment, comprising:

A first rewritable memory (Figure 2; and Paragraphs 33 and 42);

A first access control unit for controlling access by the electronic equipment to the first memory (Paragraphs 32-35 and 54; as described in the specification, paragraphs 47, 50, 56, and 57, for example, these "units" comprise the CPU executing a program, and are not a separate physical entity);

A communication unit for controlling access by the electronic equipment to a storage device on a network which has a second rewritable memory (Figure 2; and Paragraphs 43 and 54-57);

A second access control unit for controlling access by the electronic equipment to the second memory (Paragraphs 32-35 and 54-57); and

A space unification unit for forming a virtual unified memory space including the first memory and the second memory (Paragraphs 32-35 and 59-60);

But does not explicitly disclose that the first memory and second memory each comprise nonvolatile memory.

Yamagami, however, discloses that the first memory and second memory each comprise nonvolatile memory (Column 2, line 52 to Column 3, line 2). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the encrypted remote storage system of Yamagami into the remote storage system of Yahiro in order to protect the data through encryption, such that data cannot be accessed by parties without the correct keys while in transit and/or storage, thereby increasing security of the system.

Regarding Claim 11,

Claim 11 is a method claim that corresponds to system claim 1 and is rejected for the same reasons.

Regarding Claim 12,

Claim 12 is a program claim that corresponds to system claim 1 and is rejected for the same reasons.

Regarding Claim 3,

Yahiro as modified by Yamagami discloses the semiconductor memory card of claim 1, in addition, Yahiro discloses that the communication unit stores an address of the storage device on the network (Figures 6-7; and Paragraph 59).

Regarding Claim 8,

Yahiro as modified by Yamagami discloses the semiconductor memory card of claim 1, in addition, Yahiro discloses that the first

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nonvolatile memory includes a management area (Paragraphs 35, 69, 75, and 81);

The space unification unit writes information regarding the location of stored data into the management area (Paragraphs 35, 69, 75, and 81); and

One of the first access control unit and the second access control unit receives a request for writing the data to the first nonvolatile memory or the second nonvolatile memory, and write the data to a storage area (Paragraphs 54-57); and

Yamagami discloses that the space unification unit allocates an address in the first nonvolatile memory or the second nonvolatile memory to data, and writes a data identifier for identifying the data into the management area and associated with the allocated address (Column 3, line 39 to Column 4, line 5); and that the first access control unit or the second access control unit receives a request for writing the data to the first nonvolatile memory or the second nonvolatile memory, and write the data to a storage area corresponding to the address allocated to the data (Column 3, line 39 to Column 4, line 5).

Regarding Claim 9,

Yahiro discloses that the second access control unit receives a request for reading data, reads, from the management area, a location of the data on the second memory, and accesses the second memory via

the communication unit to read out the data (Paragraphs 35, 75, and 81-86); and Yamagami discloses that the location comprises an address (Column 3, line 39 to Column 4, line 5).

Regarding Claim 10,

Yahiro discloses that the second access control unit reads out a location of the second non-authentication area on which data is written from the management area, and accesses the location of the second non-authentication area to read out the encoded data via the communication unit (Paragraphs 35, 75, and 81-86); and Yamagami discloses an encoding unit for generating an encoding key for encoding or decoding the data, and for encoding the data with the encoding key (Column 3, lines 19-38; and Column 4, lines 14-29), wherein the second access control unit reads out an address of the second non-authentication area on which data encoded with the encoding key is written from the management area, and accesses the address of the second non-authentication area to read out the encoded data via the communication unit (Column 3, line 39 to Column 4, line 5); and the first access control unit reads out an address of the first non-authentication area on which the encoding key is written from the management area, and accesses the address of the first non-authentication area to read out the encoding key (Column 3, line 19 to Column 4, line 4).

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4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yahiro in view of Yamagami, further in view of Pong (U.S. Patent 6,728,843).

Yahiro discloses that the second access control unit of semiconductor cards accesses data on the second memory (Paragraphs 32-35 and 54-57); but does not explicitly disclose a contention determination unit for determining whether data to be accessed is being written or read by other entities and for starting, stopping, or delaying writing and/or reading based on the determination result.

Pong, however, discloses a contention determination unit for determining whether data to be accessed is being written or read by other entities and for starting, stopping, or delaying writing and/or reading based on the determination result (Column 3, line 65 to Column 4, line 25). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the parallel coherent memory access techniques of Pong into the remote storage system of Yahiro as modified by Yamagami in order to allow the system to efficiently handle simultaneous access requests for the same data/address by use of priorities and authorization to ensure that only authorized entities can access data while allowing prioritization in requests such that high priority entities can access data more quickly.

5. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yahiro in view of Yamagami, further in view of Kirkland (U.S. Patent 7,395,339).

Regarding Claim 4,

Yahiro as modified by Yamagami does not explicitly disclose that the communication unit accesses the storage device using identification information of the semiconductor memory card.

Kirkland, however, discloses that the communication unit accesses the storage device using identification information of the device with the access control units, which is the semiconductor memory card (Column 5, lines 32-38; and Column 8, lines 28-67). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the remote data access system of Kirkland into the remote storage system of Yahiro as modified by Yamagami in order to ensure that both the user and device are authorized to access each particular piece of data before allowing access to such, thereby ensuring that unauthorized entities cannot fraudulently obtain access to such data.

Regarding Claim 5,

Yahiro as modified by Yamagami discloses the semiconductor memory card of claim 1, in addition, Yahiro discloses that the first access control unit controls access by the electronic equipment to the first non-authentication area and permits the access by the electronic equipment to the first authentication area (Paragraphs 32-35 and 54-57); and the second access control unit controls access by the electronic equipment to a second non-authentication area which is a predetermined storage area

included in the second nonvolatile memory (Paragraphs 32-35 and 54-57); and Yamagami discloses an encoding unit for generating an encoding key for encoding the data and for encoding the data with the encoding key (Column 3, lines 19-38; and Column 4, lines 14-29); that the first nonvolatile memory includes a first authentication area and a first non-authentication area which are predetermined storage areas (Column 3, lines 19-38); and that the space unification unit allocates an address of the second non-authentication area in the second nonvolatile memory to the data encoded with the encoding key, and allocates an address of the first authentication area in the first nonvolatile memory to the encoding key (Column 3, line 39 to Column 4, line 5). Yahiro as modified by Yamagami do not explicitly disclose an authentication unit for verifying validity of the electronic equipment.

Kirkland, however, discloses an authentication unit for verifying validity of the electronic equipment (Column 5, lines 32-38; Column 8, lines 28-67; and Column 11, lines 7-16); and allowing access to storage when the authentication unit authenticates the validity of the electronic equipment (Column 5, lines 32-38; Column 8, lines 28-67; and Column 11, lines 7-16). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the remote data access system of Kirkland into the remote storage system of Yahiro as modified by Yamagami in order to ensure that both the user and device are

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authorized to access each particular piece of data before allowing access to such, thereby ensuring that unauthorized entities cannot fraudulently obtain access to such data.

Regarding Claim 6,

Yahiro as modified by Yamagami and Kirkland discloses the semiconductor memory card of claim 5, in addition, Yamagami discloses that the space unification unit determines which addresses of the first non-authentication area in the first nonvolatile memory and the second non-authentication area in the second nonvolatile memory are allocated to the data encoded with the encoding key, and allocates an address to the data in accordance with the determination (Column 3, line 39 to Column 4, line 5).

Regarding Claim 7,

Yahiro as modified by Yamagami and Kirkland discloses the semiconductor memory card of claim 5, in addition, Kirkland discloses that the second access unit permits access by the electronic equipment to a second authentication area which is a predetermined storage area in the second nonvolatile memory when the authentication unit authenticates validity of the electronic equipment (Column 5, lines 32-38; Column 8, lines 28-67; and Column 11, lines 7-16).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY D. POPHAM whose telephone number is (571)272-7215. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571)272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey D Popham
Examiner
Art Unit 2137

/Jeffrey D Popham/
Examiner, Art Unit 2137

/Emmanuel L. Moise/
Supervisory Patent Examiner, Art Unit 2137